



PEOPLE'S REPUBLIC OF CHINA— HONG KONG SPECIAL ADMINISTRATIVE REGION

SELECTED ISSUES

January 2017

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¹ These summary notes provide background documentation for the 2016 Article IV consultation discussions with Hong Kong SAR.

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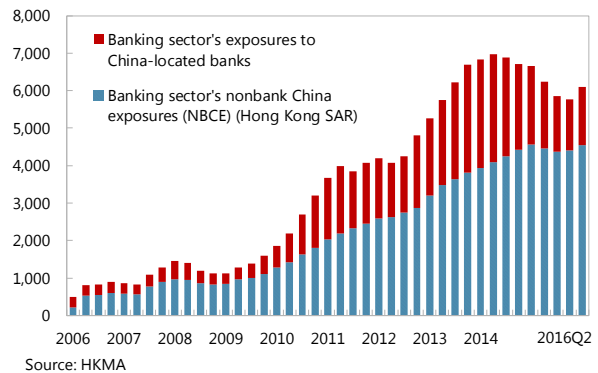
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HONG KONG SAR BANKS' NONBANK MAINLAND CHINA EXPOSURE¹

A. Size of Exposure to Mainland China and Debt at Risk

1. Hong Kong SAR, as the international financial center serving China and a significant portal connecting China with the rest of the world, has sizable exposure to China. At the end of June 2016, Hong Kong SAR banks' claims on nonbank China exposure—a broad measure that includes trade finance, lending to Mainland Chinese firms, overseas firms operating in Mainland China as well as some on- and off-balance sheet exposures—totaled HK\$4.6 trillion (US\$586 billion or 187 percent of GDP).² Of these, claims on nonbank borrowers in China totaled HK\$939 billion (US\$121 billion or 39 percent of GDP). Meanwhile, claims on onshore Chinese banks totaled HK\$1.5 trillion. Notably, this interbank exposure has fallen dramatically since 2015; the current exposure is only a little over half of its peak in mid-2014. Meanwhile, although current nonbank exposure remains near its peak, the rate of growth has slowed rapidly since 2015; over the first half of 2015, there was no lending growth in aggregate. The reduction in China exposure since 2015 may be due to a slowdown of the Mainland economy and some unwinding of currency exposure from Mainland corporates.

Exposure to China
(In billions of HKD)



Hong Kong SAR banks are exposed to potential losses from the Mainland

2. Given growing interconnectedness between Hong Kong SAR and the Mainland, Hong Kong SAR banks are exposed to credit risks from their Mainland lending. By one measure, potential credit loss for Hong Kong SAR banks could reach 2.33 percent of total loan portfolio if Mainland real growth rate falls to 4 percent in one year.³ To assess banks' vulnerabilities from a granular perspective where the composition of lending portfolios is taken into consideration, staff combined data from the HKMA and private analysts to gauge, as a rough estimate, Hong Kong SAR banks' Mainland exposure by borrower type—SOEs, private entities and non-Mainland entities—as well as the sectors where these loans were deployed. This more granular approach offers a baseline from which we could assess the varying degrees of vulnerabilities across different types of lending portfolios. In this analysis, we used current data—

¹ Prepared by Sally Chen and Daniel Law (Resident Representatives Office Hong Kong SAR).

² The total tally of this broad category could include double counting of some transactions. For example, some trading financing transactions could also be included as a part of on-balance sheet items.

³ Hong Kong Monetary Authority (2016).

as of Q1:2016—to establish a baseline against which developments could take place; the analysis here focused on the composition of exposure by borrower type and economic sectors without the additional layer of downside risks. Additionally, we used the metric of $ICR < 1$ —the same as the approach adapted by the April GFSR—to signal potential corporate balance sheet stress. Although this approach is narrow and may understate debt at risk, it is intuitive—if operating cash flow is insufficient to cover interest expenses, it signals balance sheet stress.

3. Staff analysis suggests that relative to potential debt at risk for Mainland firms themselves, Hong Kong SAR banks, in aggregate, are less exposed to losses from Mainland firms—and more specifically, losses tied to Mainland-related lending. For reference, A-shares have a debt-at-risk ratio (relative to sample firms' total liabilities) of 12.75 percent (based on 4-quarter moving averages),⁴ or 1.42 percent of Hong Kong SAR's total banking sector assets.^{5,6} By comparison, even under an extreme stress scenario where we assume no recovery—and using the same sectoral vulnerabilities as seen in A-shares—the estimated exposure to Hong Kong SAR banks is smaller, at 9.52 percent for loans used in Mainland (text chart below).⁷ This lower debt-at-risk ratio for Hong Kong SAR banks relative to A-shares, despite using the same debt-at-risk ratios for industry sectors, suggests that Hong Kong SAR banks in aggregate lend less to more at-risk firms on Mainland. Moreover, the assumption used—assuming that Mainland borrowers from Hong Kong SAR banks have the same balance sheet vulnerabilities as the average A-share companies in the same sector—suggests that estimates derived could represent the upper bound of potential bank losses from Mainland lending. That said, if downside risks—including a sizable growth contraction in China, and sharp increases in corporate insolvency—materialize, the knock-on effect on Hong Kong SAR banks could be sizable and exceed the estimates presented here, particularly given increasing interconnectedness between the Hong Kong SAR and Mainland economies.

4. Since 2014, guidance and close monitoring of bank lending activities, prompted in part by increased exposure to Mainland companies, in addition to existing strict credit approval processes and limited country and industry exposures have eliminated some of the

⁴ Results are qualitatively the same with 8-quarter moving averages.

⁵ A similar exercise by HKMA—using $ICR < 1$ to indicate balance sheet stress and relying on listed firms' data in Hong Kong SAR from 1995 to 2015—compared to staff's sample of listed firms in Mainland—suggests a debt-at-risk ratio of about 23 percent for nonlocal corporates. The difference in debt-at-risk ratios stems primarily from different datasets used (i.e., different samples of companies) and different definitions of ICR. Indeed, the debt-at-risk estimates are found to be sensitive to definitions of income, interest expenses and samples. For example, the debt-at-risk estimate for nonlocal corporates listed in Hong Kong is found to be lower at 13 percent if EBITDA is used instead of EBIT, according to HKMA estimates.

⁶ Hong Kong Monetary Authority (2016).

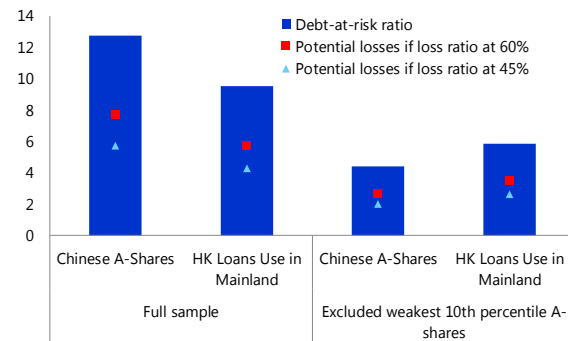
⁷ As data on sectoral exposure for Hong Kong SAR banks are not available, using the debt-at-risk ratios for A shares allows us to estimate an upper bound of potential losses for banks' Mainland loan portfolios. The debt-at-risk ratio of Chinese A-shares is used as a rough gauge the credit quality for firms operating in China; for Hong Kong banks, these ratios are weighted according to Hong Kong banks' sectoral exposure for the aggregate debt-at-risk ratio.

risks of nonperforming loans.⁸ Therefore, it is reasonable to assume that Hong Kong SAR banks have minimal exposure to these worst-performing firms. If we trim the worst-performing borrowers—the bottom 10 percent—from our sample, Hong Kong SAR banks' exposure falls to 5.8 percent or 1.07 percent of Hong Kong SAR's total banking sector assets. Interestingly, for Mainland A-shares, the fall in ratio is larger—from 12.75 percent to 4.4 percent; this suggests that vulnerabilities in Mainland corporates are concentrated—not surprisingly—in the worst-performing firms. The more modest decline in Hong Kong SAR banks' exposure suggests that Hong Kong SAR banks in general are less exposed to these riskier firms, though individual bank's exposure could still be sizable. Indeed, staff analysis suggests a high degree of variation across banks.

5. Applying a loss ratio of 60 percent—the same ratio applied to the April GFSR analysis of Chinese corporates—to the analysis, debt at risk falls for all categories.

For Hong Kong SAR banks, the ratio falls from 9.5 percent to 5.7 percent; for A-shares, 12.7 percent to 7.7 percent. Applying a less stringent loss ratio of 45 percent—also the Basel standard—lends an even lower debt at risk of 4.3 percent and 5.7 percent for Hong Kong SAR banks and A-shares, respectively.

Comparison of Debt-at-Risk Ratio and Potential Losses
(Percent of loans, 4-quarter moving average)



Sources: HKMA; WIND; and IMF staff estimates.

Exposure is concentrated in real estate, large SOEs and multinationals

6. In aggregate, Hong Kong SAR banks' exposures are not very heavily concentrated in particular industries. Exposures to "old" industries such as mining and textiles are small. However, lending to property developers and the construction industry account for a relatively high portion of total Mainland-related lending. There is also sizable exposure to the manufacturing sector as well as the wholesale and retail sectors.

7. Meanwhile, about 40 percent of Mainland-related lending in Hong Kong SAR went to SOEs, with another 40 percent to multinational companies operating in China and the rest to top-tier listed Mainland private firms. In general, these borrowers tend to have strong credit fundamentals. Multinational companies, in particular, are international corporations and Hong Kong SAR conglomerates operating in Mainland who have diversified income stream and are less reliant on revenues from Mainland operations. As such, Hong Kong SAR banks' exposure to Mainland could be well below that suggested by aggregate data. Meanwhile, collaterals posted—a common practice with Chinese loans, both onshore and in Hong Kong SAR—serve as a risk buffer, helping to insulate Hong Kong SAR lenders.

⁸ Hong Kong Monetary Authority (2015). Practice note on credit risk management to the corporate sector, Ref #: B10/1C.

Potential risks are higher among SOEs

8. Using the composition of A-shares in each major borrower type for SOEs and private entities as a baseline, and assume that this composition is representative of Hong Kong SAR banks' lending portfolio, potential risks could be higher in loans to SOEs. In line with findings elsewhere (including the April GFSR), SOEs in the A-share market have a debt-at-risk ratio of 14.2 percent, higher than the ratio seen for other borrowers—9 percent for private firms in the A share universe, for example. Given the large exposure to SOEs, potential losses from these loans could be sizable, particularly if the assumed implicit government guarantee were to weaken. That said, data on the actual composition of lending to SOEs—by types of economic sectors, for example – for use in Mainland is not available; debt at risk for corporate that borrowed from Hong Kong SAR banks could well be different from the average SOE in Mainland, given stringent lending standards in Hong Kong SAR. Anecdotal reports from analysts and supervisors suggest that most of these SOE borrowers are large SOEs that receive strong government support; risks presented by these borrowers could be lower than the general SOE population.

9. That said, the risk buffer could be inadequate in a downside risk scenario, particularly in which collateral recovery may be sluggish and collateral valuation is heavily discounted. Not surprisingly, vulnerabilities are particularly high in the overcapacity sectors, with debt-at-risk ratios reaching as high as 39 percent for metal products, rubber and plastic manufacturers and the mining sector.⁹ By contrast, risks appear limited in sectors tied to the more service-oriented “new” industries such as electricity and gas production as well as printing and publishing; debt-at-risk ratios for these sectors were as low as 1.2 percent. Against this context, HKMA's macroprudential and microprudential measures are important and remain the first line of defense.

B. Large Divergence in Individual Bank Exposures

10. There is a high level of divergence in bank exposures to Mainland-related lending. Of the four banks studied,¹⁰ potential debt at risk ranges from 9.2 percent of their respective Mainland exposure to 11.8 percent.¹¹ Notably, while Bank A is particularly exposed to its SOE lending (16.3 percent of total assets), Bank B has outsized exposure to Mainland private firms,

⁹ This exercise assumes that the composition of Hong Kong SAR bank lending to Mainland is the same as the sectoral composition of A-shares.

¹⁰ Citi Research (2016).

¹¹ We apply system-wide debt-at-risk ratios by borrower type (based on A-shares) to each banks' lending portfolio to estimate the exposure relative to the total balance sheet, as proxied by total nonbank Mainland exposure, total lending and total risk-weighted assets. While the ratios we used are derived from Mainland exposures, total loans and assets used here are based on each bank's aggregate balance sheets, and thus include lending activities elsewhere.

with 21 percent of total assets in Mainland lending. This underscores the need to look at banks individually.

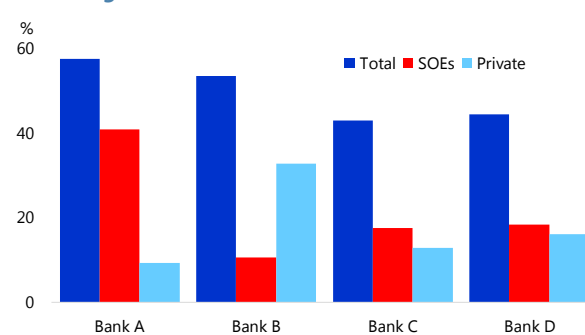
Table 1. Selected Banks' Nonbank Mainland China Exposure in Total Assets in 2015
(In percent)

	Bank A	Bank B	Bank C	Bank D
In percent of total assets				
Total Non-bank mainland China exposure	22.90	34.50	16.40	15.20
Mainland non-private entities	16.30	6.80	6.70	6.30
Mainland private entities	3.70	21.10	4.90	5.50
Non-Mainland entities	2.60	1.20	3.90	1.80
Others for PRC	0.30	5.40	0.90	1.50

Source: Citi Research.

11. Analysis using other metrics offer qualitatively the same conclusions and underscores heterogeneous risk profiles of different banks' lending portfolios. Relative to total loans (that is, banks' entire loan portfolios, inclusive of Mainland-related lending), Bank A remains particularly exposed in its SOE lending, at a sizable 42 percent, while Bank B is particularly exposed to private firms, which accounted for 36 percent of total loans. Meanwhile, looking at risk-weighted assets to gauge potential recapitalization needs from these lending activities, Banks A and B, as expected, are particularly vulnerable.

Lending Share Mainland China Corporates in Risk-Weighted Assets



Source: Citi Research.

Table 2. Selected Banks' Nonbank Mainland China Exposure in Total Loans and Risk-Weighted Assets in 2015
(In percent)

	Bank A	Bank B	Bank C	Bank D
In percent of total loans				
Total non-bank mainland China exposure	58.73	58.47	31.86	41.16
Mainland non-private entities	41.81	11.52	13.02	17.06
Mainland private entities	9.49	35.76	9.52	14.89
Non-Mainland entities	6.67	2.03	7.58	4.87
Others for PRC	0.77	9.15	1.75	4.06
In percent to total risk-weighted assets				
Total nonbank mainland China exposure	57.45	53.52	42.98	44.32
Mainland non-private entities	40.89	10.55	17.56	18.37
Mainland private entities	9.28	32.73	12.84	16.04
Non-Mainland entities	6.52	1.86	10.22	5.25
Others for PRC	0.75	8.38	2.36	4.37
CET1 capital ratio (latest) 1/	18.58	12.20	16.80	16.10

Sources: Citi Research, Bank earning reports, Bloomberg; IMF staff calculations.

1/ 2016H1 for Banks A, C, & D; 2015 for Bank B.

C. Continued Monitoring Crucial

Staff's analysis, combining information on A-shares, HKMA data as well as methodologies used in the April 2016 GFSR, suggests Hong Kong SAR banks are generally less exposed to riskier Mainland corporates. By applying the sectoral composition of A-shares and their debt-at-risk ratios to Hong Kong SAR banks' Mainland portfolios, we derived a rough estimate of potential losses for Hong Kong SAR banks. These estimates represent the upper bound of potential losses under current circumstances. These relatively low estimates compared to average A-shares suggests that Hong Kong SAR banks' exposure to more vulnerable Mainland corporates may be limited.

That said, a sharp deterioration in the balance sheet of Mainland corporates, as well as a sharper-than-expected downturn in the Mainland economy could negatively affect Hong Kong SAR banks, raising debt at risk well above estimates suggested here. As Hong Kong SAR banks generally have sizable buffers against downside risks, the best approach to such a scenario is vigilance, including maintaining high origination and underwriting standards. Staff would also support continued close cooperation with Mainland supervisors to ensure information sharing and risk monitoring. Additionally, existing policies, including stable funding requirements imposed in October 2013, could help further insulate banks from negative shocks. Specifically, stable funding requirements discourage rapid loan growth, especially those used outside of Hong Kong SAR; they require banks to ensure adequate stable funding to support their lending business from 2014 onwards. As evidence of the effectiveness of this measure, loan growth has decelerated gradually since then.

References

Hong Kong Monetary Authority, 2016, *Half-Yearly Monetary and Financial Stability Report* (March).

Hong Kong Monetary Authority, 2015, "Practice Note on Credit Risk Management to the Corporate Sector," Ref #: B10/1C (Hong Kong SAR).

Citi Research, 2016, "Hong Kong Banks, "NBMCE"—An Effective Tool for Measuring China Exposure Risks."

PRICE AND WAGE FLEXIBILITY IN HONG KONG SAR¹

Evidence at the aggregate and industry level suggests that broadly speaking, price and wage adjust more strongly in Hong Kong SAR (than the United States, United Kingdom, and Singapore by some measures). This flexibility helps stabilize real aggregates such as output and employment.

1. Price and wage adjustments are important in helping mitigate the fluctuations of real aggregates. This is especially true for Hong Kong SAR, which cannot use exchange rate adjustment as a shock absorber due to the fixed exchange rate regime. We compare the price and wage flexibility in Hong Kong SAR with the United States, United Kingdom, and Singapore by using aggregate and industry level data. We choose these three economies as the benchmarks because the United States and United Kingdom are usually referred as countries with relatively flexible markets, and Singapore is often viewed as a small open economy which shares many similar features with Hong Kong SAR.

A. Aggregate Evidence

2. Inflation vs. output fluctuations. More flexible price adjustments can better mitigate the impact of shocks on the real economy, leading to more moderate output fluctuations. For Hong Kong SAR, a one-percent increase of the positive output gap corresponds to a 0.14 percent rise in inflation (Figure 1). This is marginally larger than the response in the United States (0.13 percent) and Singapore (0.11 percent). Based on this measure, Hong Kong SAR's price adjustment is slightly more flexible than the United States and Singapore.²

3. Labor earnings growth vs. unemployment. In economies with more flexible labor markets, labor costs adjust more promptly to mitigate employment fluctuations. We test it by looking at the statistical relationship between the growth of labor earnings and the unemployment rate gap (a version of the Phillips curve). From 1990 to 2015, a one-percent increase in the unemployment gap corresponds to a 1.8 percent drop in the growth rate of labor earnings (Figure 2). This drop is larger than the response in United States and United Kingdom (0.7 and 1.5 percent, respectively), although smaller than the response in Singapore (3.1 percent). This implies the adjustment of labor costs is more flexible in Hong Kong SAR than in the United States or United Kingdom but less flexible than in Singapore.

B. Industry Level Evidence—Labor Earnings

4. We compare the flexibility of labor markets in Hong Kong SAR and the United States by examining the industry-level evidence.

¹ Prepared by Si Guo (APD), based on the forthcoming IMF working paper "Price and Wage Rigidity in Hong Kong SAR."

² The United Kingdom is not included in this comparison because official quarterly inflation data is not adjusted for seasonal factors.

Statistical Properties of Wage Growth Distribution

5. In a labor market with downward wage rigidity, nominal wage cuts are limited. As a result, the cross-time distribution of wage growth should exhibit a corresponding pile up of observations of zero earnings growth and a relatively short left tail. This can be measured by the discontinuity of the density function around zero. Figure 3 shows the distribution of industry-level payroll (yoy) growth in Hong Kong SAR from 2000 to 2016:Q1. The distribution does not present a substantial discontinuity around zero (i.e., the bar containing [0, 1] is not much higher than the bar containing [-1, 0]).

6. Another implication of the downward wage rigidity is that the distribution of labor earnings growth tends to be more “positively skewed,” because large negative adjustments may be constrained. This is not the case for Hong Kong SAR either: the distribution has a long left tail, and about one-third of the observations are negative. More formally, we can use “skewness” as the indicator to measure the symmetry of the earnings growth distributions: a more flexible economy should have a more symmetric wage growth distribution and hence a smaller “skewness.” Table 1 presents the skewness of the weighted distributions of labor earnings growth in Hong Kong SAR as well as the United States. The skewness in Hong Kong SAR is on par with the United States, regardless of whether we define the top and bottom 1 percent or 5 percent of the sample as outliers. That is, the distribution of labor earnings growth in Hong Kong SAR is broadly as symmetric as the United States.

Table 1. Distribution¹ of Earnings Growth: Skewness

Sample selection	1-99 percentile	5-95 percentile
Hong Kong SAR	0.17	0.11
United States	0.12	0.12

¹ Low inflation years only. Smaller skewness implies less downward rigidity.

7. One possible caveat of using the statistical properties of earnings growth distribution to examine the extent of flexibility is that we may attribute all the variations in labor earnings growth distributions to the difference in labor market flexibility. Therefore, we also estimate an empirical model of nominal wage formation under downward wage rigidity. In particular, we assume that the equilibrium wage (under flexible wage setting) is determined by a group of control variables (e.g., industry level GDP growth, inflation, etc.). However, in each period, a fraction of firms cannot fully adjust their wages: the change of their nominal wages is subject to a lower bound. This downward wage rigidity creates a wedge between equilibrium wage growth and actual wage growth. This wedge is larger when equilibrium wage growth is smaller (because the lower bound of wage growth is more likely to be binding). Our estimation results show that Hong Kong SAR has a much smaller floor of wage adjustment than the United States, which suggests that the labor earnings adjustment in Hong Kong SAR is more flexible than the United States.³

³ See the forthcoming IMF Working Paper *Price and Wage Rigidity in Hong Kong SAR* for the details of the model and estimation results.

Consumer Prices

8. How flexible are the price adjustments in Hong Kong? Figure 4 shows the distribution of price changes at the item level in Hong Kong SAR and the United States. For Hong Kong SAR, although the frequency of having price changes fall into $[-1, 0]$ is substantially smaller than $[0, 1]$ (which suggests some extent of downward rigidity), the extent of discontinuity around zero is on par with the United States. Table 2 shows that for service items (which are more affected by local factors than manufacturing items), the skewness of price change distribution in Hong Kong SAR is smaller than the United States, regardless of how we remove the sample outliers. This implies that for service items, the price adjustment in Hong Kong SAR is likely to be more flexible than the United States. This is also consistent with our previous findings that Hong Kong SAR has a more flexible labor market.

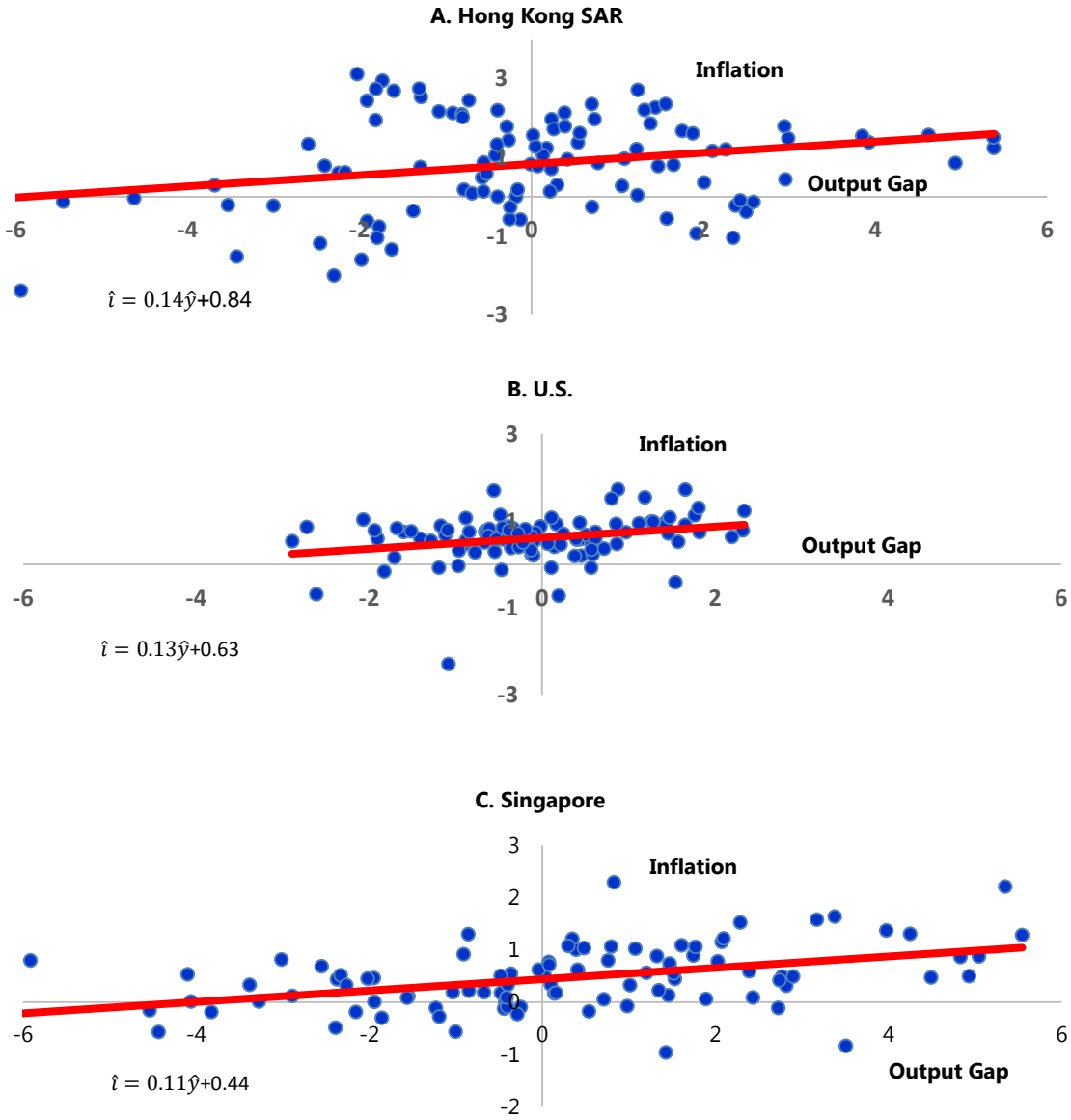
Table 2. Distribution ¹ of Price Changes (Service Items Only): Skewness		
Sample selection	1-99 percentile	5-95 percentile
Hong Kong SAR	-0.48	-0.45
United States	-0.17	-0.35

¹ Low inflation years only. Smaller skewness implies less downward rigidity.

C. Conclusion

9. Based on the comparison at the aggregate and industry level, we find that broadly speaking, price and wage adjust more strongly in Hong Kong SAR than in the United States and United Kingdom, (and Singapore by some measures), which helps stabilize real aggregates such as output and employment. Given the fixed exchange rate system in Hong Kong SAR, this flexibility is crucial in mitigating macroeconomic shocks.

Figure 1. Inflation and Output Gap



Sources: Haver; and IMF staff calculations

Figure 2. Labor Earnings Growth and Unemployment Gap

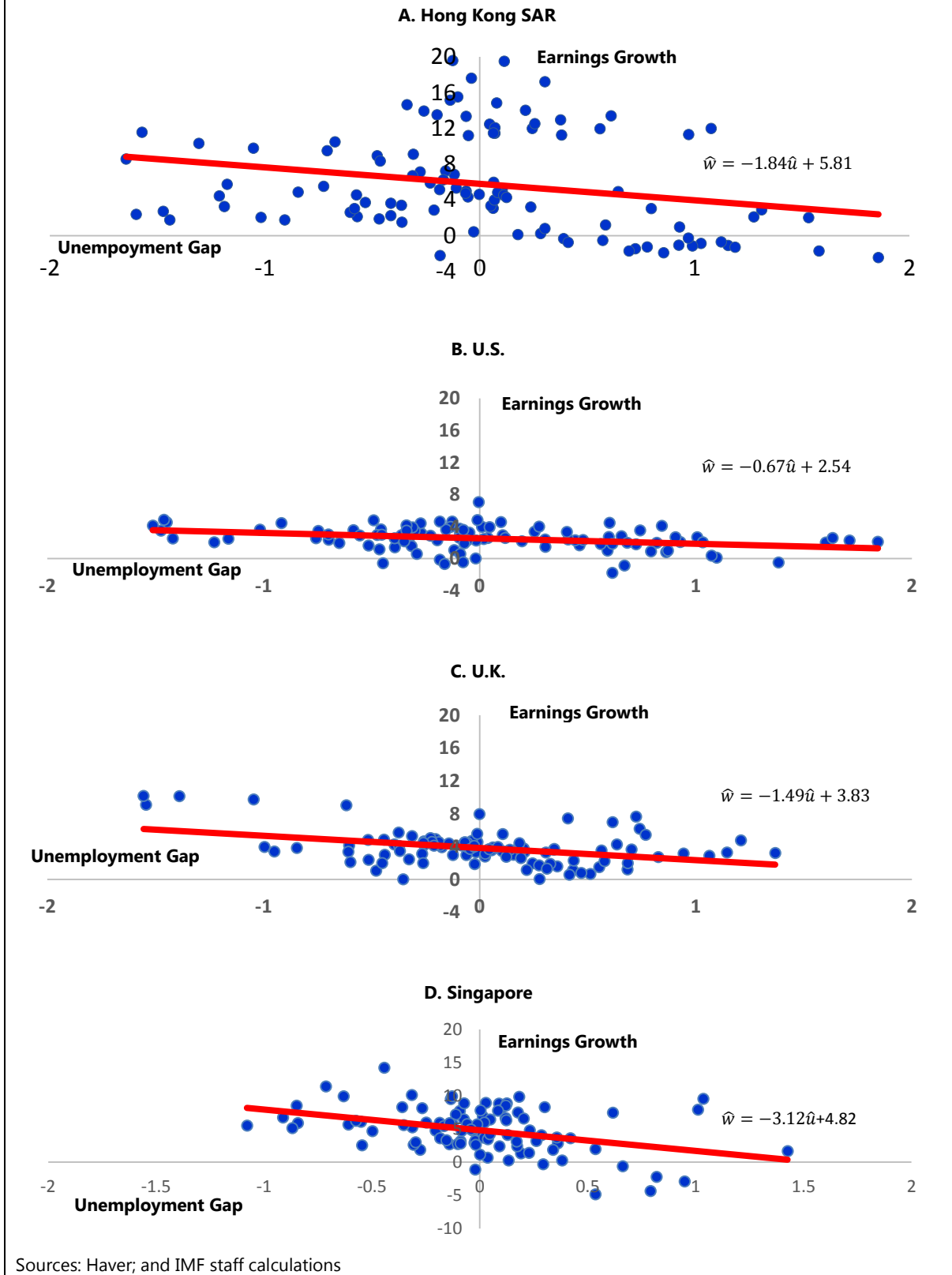
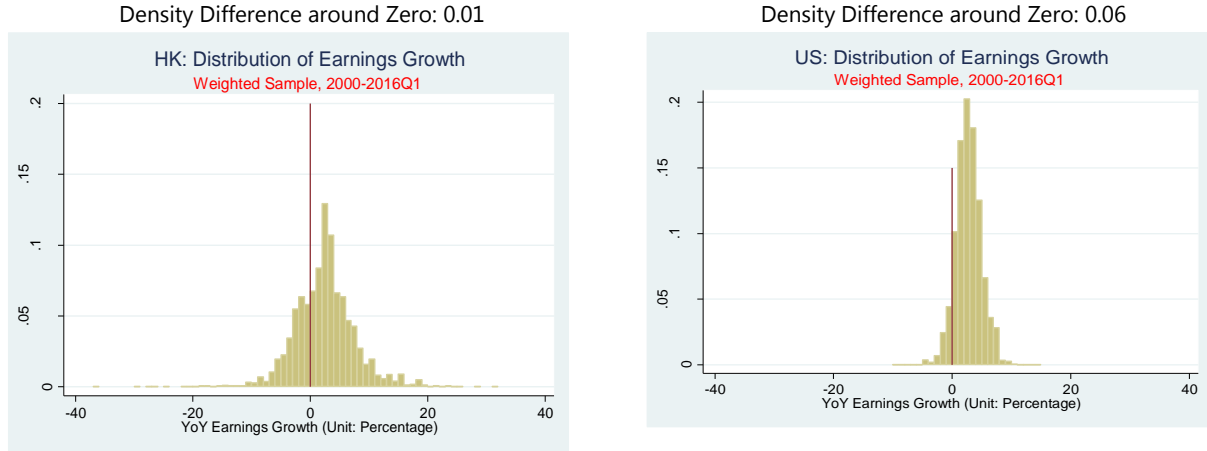
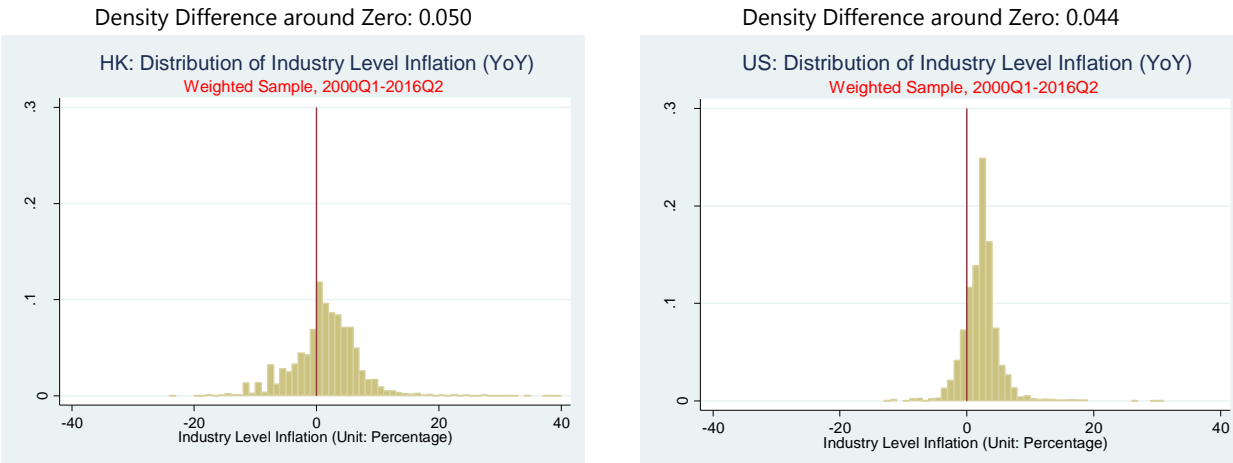


Figure 3. Distributions of Labor Earnings Growth 1/



1/ "Density Difference around Zero" is defined as the difference between probability of labor earnings growth falling into (0%, 1%) and the probability of labor earnings growth falling into (-1%, 0%).

Figure 4. Distribution of Inflation 1/



1/ "Density Difference around Zero" is defined as the difference between probability of price change falling into (0%, 1%) and the probability of price change falling into (-1%, 0%).

EXTERNAL SECTOR DEVELOPMENTS IN HONG KONG SAR¹

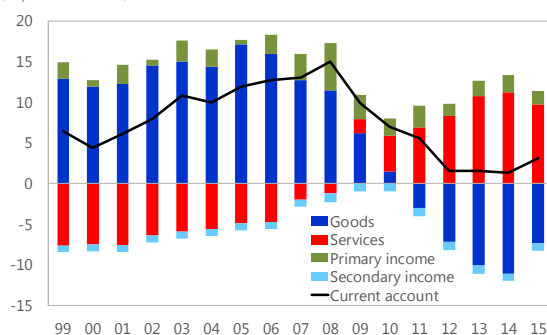
A. Background

1. Hong Kong SAR's external balance has shown large swings over the last 40 years.

- Official balance of payments data is available only from 1999. After rising to 15 percent of GDP in 2008, the current account surplus narrowed to 1.3 percent of GDP in 2014, and then widened to 3.1 percent in 2015.
- National accounts data is available since 1973, much longer than the official balance of payments. Net exports of goods and services in the national accounts are identical with trade balance of goods and services in the balance of payments. The trade balance is also a good proxy for the current account balance as the difference between the two is only about 1 percent of GDP historically.
- Net exports of goods and services in the national accounts show that the current account for Hong Kong SAR has experienced large swings over the past 40 years: (i) from double-digit surplus in mid-1970s to deficits in late 1970s on global oil price shocks, (ii) rebounding to double digit surplus through early-1990s but sharp decline in the run up to the Asia Financial Crisis, and (iii) recovering to double digits again during the global boom in mid-2000s but narrowing surplus after the Global Financial Crisis.

Current Account Balances

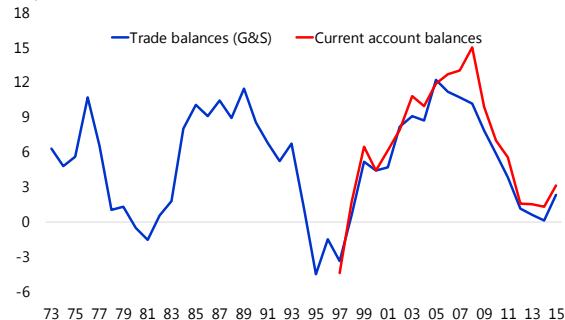
(In percent of GDP)



Sources: Haver Analytics; CEIC; IMF staff estimates.

External Balances

(In percent of GDP)



Sources: Haver Analytics; CEIC; IMF staff estimates.

2. Goods and services trade have played very different roles in narrowing the current account surplus over the last six years.

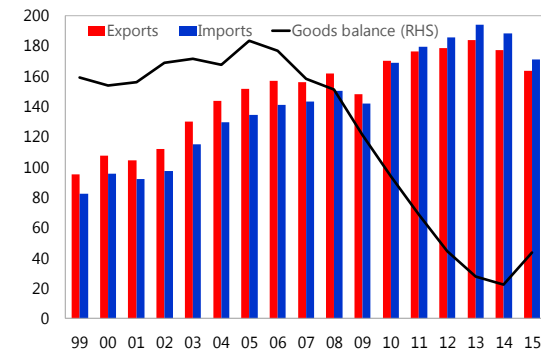
- Hong Kong SAR used to have a very stable and large goods surplus until mid-2000s, at more than 10 percent of GDP. However, the goods trade balance has declined since then, turning into deficits since 2011. It posted a deficit of 11.1 percent of GDP in 2014, compared to a surplus of 17.1 percent of GDP in 2005.

¹ Prepared by Joong Shik Kang (APD).

- In contrast, the services trade balance which used to run deficits of more than 5 percent of GDP by mid-2000s, has gradually improved since then, turning into a surplus in 2009, and reaching 11.2 percent of GDP in 2014.
- In sum, the current account surplus narrowed by about 12 percentage points of GDP between 2008 and 2015 (from 15.0 to 3.1 percent of GDP), during which deterioration of the goods trade balance (by about 19 ppt) was partially offset by improvement in the services trade balance (by about 11 ppt). A narrowing primary income surplus accounted for the remaining deterioration of the current account (by about 4 ppt).

Goods Balances

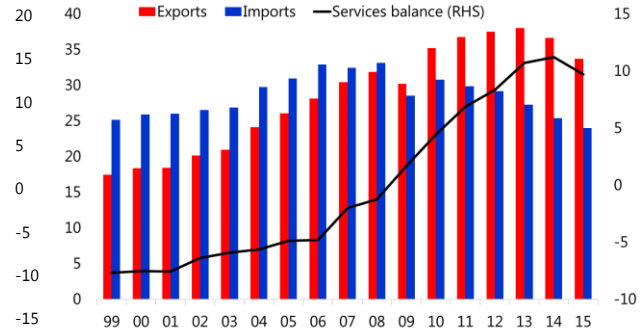
(In percent of GDP)



Sources: Haver Analytics; CEIC; IMF staff estimates

Services Balances

(in percent of GDP)



Sources: Haver Analytics; and IMF staff estimates

3. This note aims to answer to following two questions:

- *What are the major factors behind the large moderation of current account surplus over the last 7-8 years?*
- *Is Hong Kong SAR's current account surplus likely to improve again back to double digit over the medium term as were the cases in 1980s and 2000s? In other words, what is the reasonable range for the current account norm in Hong Kong SAR?*

B. Main Drivers of Current Account Developments

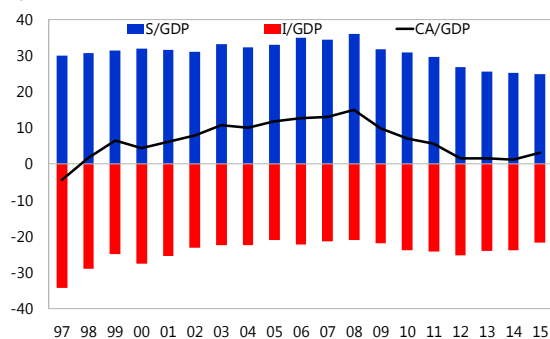
4. The current account surplus has fallen despite a notable slowdown in growth.

- Average GDP growth has moderated significantly over the last few years, from about 7½ percent (2003–07 average) to about 2½ percent (2012–15 average).
- Accordingly, staff estimates based on a multivariate filter approach suggest that the output gap of Hong Kong SAR has narrowed and turned to negative in 2015.
- This contrasts with the post-Asia Financial Crisis period. Then growth slowed from 5 percent (1991–97 average) to about 3 percent (1999–2003), and the current account balance improved substantially, from a deficit of about 4½ percent of GDP in 1997 to a surplus of about 10 percent in 2003–04.

5. A standard investment-savings identity framework suggests that over 1999 to 2004 a steady decline in private savings accounts for more than three-quarters of narrowing current account surplus but more recently private dissaving has contributed to the decline in the current account surplus.

- In early and mid-2000s, large decline in private investment was the main culprit accounting for more than a half of widening current account surplus, consistent with a general trend of protracted investment slump across Asia countries after the Asia Financial Crisis. Higher savings by both public and private sectors also contributed to widening external surplus to a less extent.
- In contrast, more than three quarters of narrowing current account surplus since 2008 was due to large private sector dissaving. Private consumption growth was stronger than overall GDP growth by about 1½ percent per year on average (in contrast to pre-GFC period). Accordingly, private consumption-to-GDP ratio increased by more than 6 percentage points over this period in nominal terms (about 8 percent in real terms). In line with this strong consumption growth, import growth outpaced export growth, leading to negative contribution of net exports to overall GDP growth.
- Tight labor markets and steady income growth, together with strong wealth effects from long rally in housing and stock prices, have contributed strong consumption growth, leading to steady decline in private savings.

Investment, Savings, and Current Account
(In percent of GDP)



Sources: Haver Analytics; and IMF staff estimates.

Breakdown of Current Account Developments
(Percentage points of GDP)

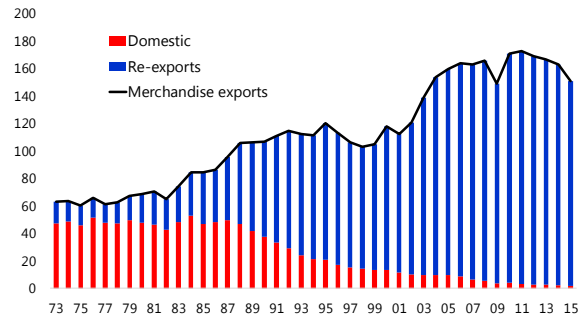
	98-08	08-15
CA/GDP	13.3	-11.9
S/GDP	5.3	-11.2
S_public/GDP	2.5	-2.1
S_private/GDP	2.8	-9.1
I/GDP	8.0	-0.7
I_public/GDP	0.8	-1.2
I_private/GDP	7.2	0.5

Several structural factors have contributed to narrowing current account surplus over the last few years.

6. Factor 1. External rebalancing of Mainland China

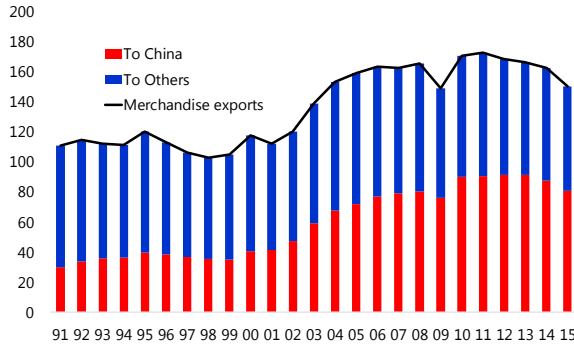
- Hong Kong SAR is a key trading financial gateway between Mainland China and the rest of the world. Domestic exports used to be the main exports from Hong Kong SAR until mid-1980s, but since then re-exports increased dramatically, now accounting for more than 98½ percent of total merchandise exports. The Mainland is the destination of more than a half of merchandise exports from Hong Kong SAR and more than three-quarters of merchandise exports to non-China countries are originally from the Mainland.

Merchandise Exports
(In percent of GDP)



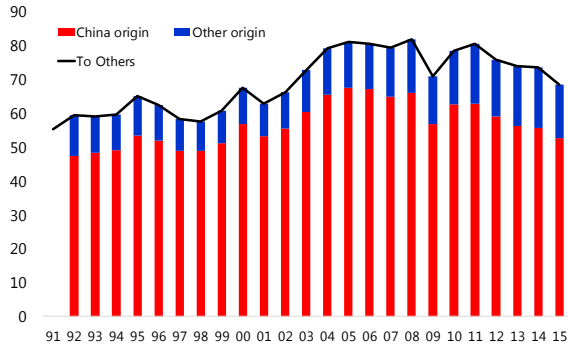
Sources: Haver Analytics; CEIC; and IMF staff estimates.

Merchandise Exports
(In percent of GDP)



Sources: Haver Analytics; CEIC; and IMF staff estimates.

Merchandise Re-Exports to Non-China
(In percent of GDP)



Sources: Haver Analytics; CEIC; and IMF staff estimates.

- Mainland China’s current account surplus has narrowed sizably since the global financial crisis, from about 10 percent of GDP to below 3 percent, affecting trade surplus of Hong Kong SAR vis-à-vis Mainland China as well as vis-à-vis other countries as Hong Kong SAR is a major trading hub for Mainland China.
- As there is no official bilateral BOP data, we construct Hong Kong SAR’s bilateral goods trade balance vis-à-vis Mainland China.² On this measure, the bilateral goods trade balance vis-à-vis Mainland China gradually increased to about 15–20 percent of GDP in mid-2000s, but has since narrowed to 5–10 percent and has recorded a deficit since 2012, amid external rebalancing of Mainland China. The shift implies a lower surplus of about 11¾ percentage points of GDP (2006–08 average vs. 2013–15 average).
- Given the role as a trading hub, this development would have been offset by bilateral trade developments with other countries. Feenstra and Hanson’s (JEMS, 2003) examined Hong Kong SAR’s role in intermediating trade between China and the rest of the world, distributing

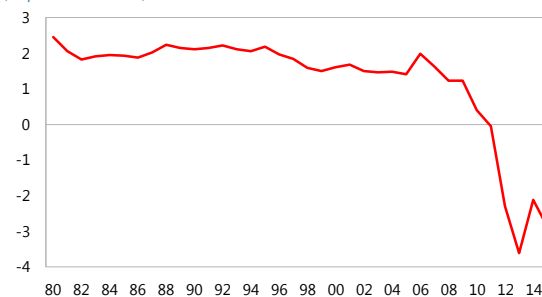
² This involves subtracting bilateral exports/imports involving processing trade from bilateral merchandise trade data. Processing trade is recorded in merchandise trade data but is not included in the BOP data because the BOP adopts change of ownership principle under BPM6.

a large fraction of China's exports. They found that, net of customs, insurance, and freight charges, re-exports of Chinese goods are more expensive when they leave Hong Kong SAR than when they enter with an estimated re-exports trade margin of 0.357 though it varies across different types of products. This implies that the offset would have been about 7½ percentage points of GDP. So Mainland China's external rebalancing looks to have narrowed Hong Kong SAR's trade surplus by about 4–4½ percentage points of GDP thus far.

7. Factor 2. Gold trade balance

- Hong Kong SAR's trade balance of gold had been stable at about 2 percent of GDP until 1996 and since then was stable at about 1½ percent for a decade until 2008–09 period. However, over the last few years, the balance has deteriorated significantly, and turned into deficits since 2011, posting average deficit of 2¾ percent of GDP.

Trade Balance of Gold 1/
(In percent of GDP)



Sources: The government of Hong Kong SAR; and IMF staff estimates.
1/ Proxied by the difference between merchandise trade balance and goods trade balance under BPM6 without adopting change of ownership principle.

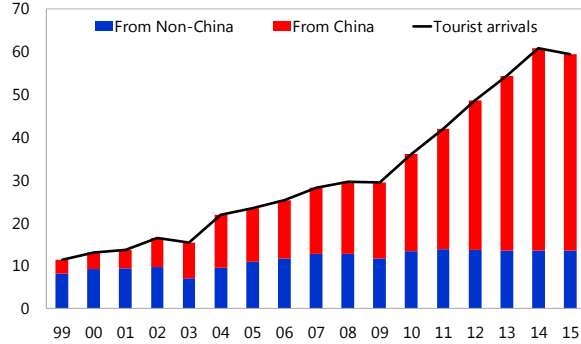
- Hong Kong SAR has a strong advantage as a logistic hub for high-value goods because it does not impose any control on the movements of gold bars in and out of the city. For example, no taxes are levied on moving the metal into Hong Kong SAR, or on storing the bars before they are sent to buyers across the border. To meet increasing demand for gold trade—China is the largest gold producer and the second largest consumer in the world—Hong Kong SAR opened a Precious Metals Depository (particularly for gold bars) in 2009. Since then Commodity exchanges (including the Hong Kong Mercantile Exchange) have made this Depository the designated physical settlement venue for their gold contracts, and accordingly both exports and imports of gold have surged, leading to a structural break in Hong Kong SAR's gold trade balance.
- On net, this structural changes in gold trade have lowered the external balance by about 4¼ percentage points of GDP in recent years.

8. Factor 3. Rising tourist arrivals from Mainland China

- Mainland China tourist to Hong Kong SAR surged over the last decade partly due to the easing of entry visa restrictions for Mainland China tourists, increasing spending by Mainlanders in Hong Kong SAR over 2010–2015. While Mainland tourist arrivals more than doubled from 22.6 million in 2010 to 45.9 million in 2015, non-Chinese tourist arrivals during this period remained constant at about 13.5 million. The rising inbound Mainland tourism has also contributed domestic income and consumption.
- Accordingly, imports of consumer goods and foodstuffs from non-China countries rose significantly, by 7–7½ percentage points of GDP, during this period.

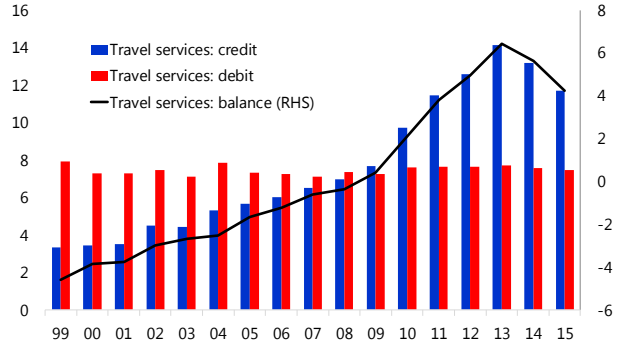
- It has been of course partially offset by the increase in travel services exports which rose by about 6 percentage points of GDP during the same period.
- So, increased Mainland China tourism inflows would have narrowed Hong Kong SAR's external balance by about 1–1½ percentage points of GDP.

Tourist Arrivals
(Million people)



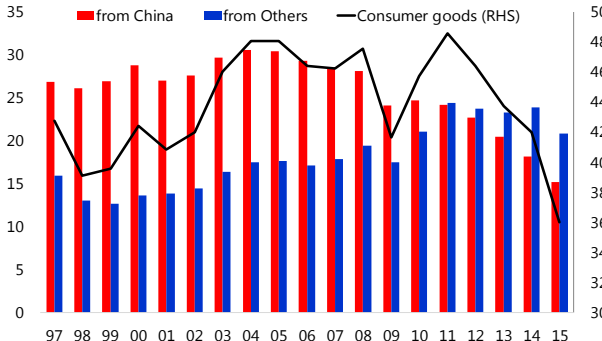
Sources: Haver Analytics; CEIC; and IMF staff estimates.

Travel Services
(In percent of GDP)



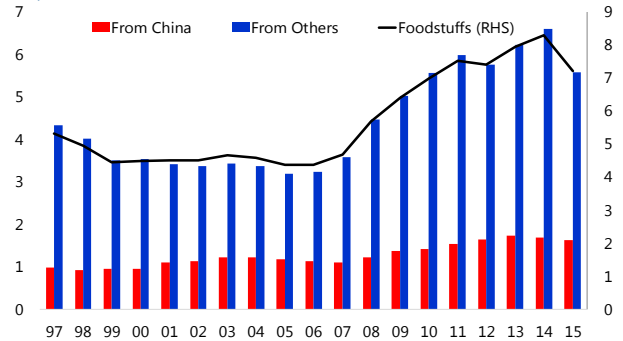
Sources: Haver Analytics; CEIC; and IMF staff estimates.

Consumer Goods Imports
(In percent of GDP)



Sources: Haver Analytics; CEIC; and IMF staff estimates.

Food Stuffs Imports
(In percent of GDP)

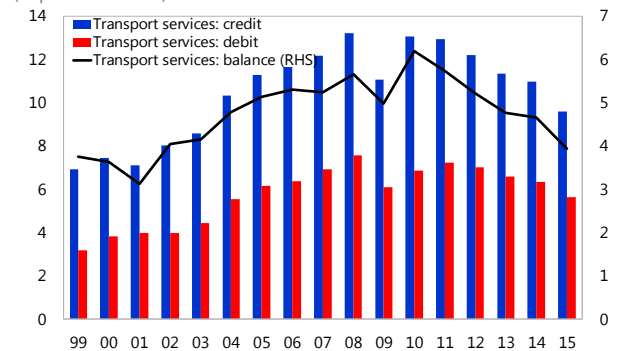


Sources: Haver Analytics; CEIC; and IMF staff estimates.

9. Factor 4. Steady decline in transport service

- The transportation service surplus has steadily declined over the past few years due to weak growth of world trade as well as structurally lower re-exports from China as exports previously routed through Hong Kong SAR are increasingly routed out of Shanghai and other ports on the Mainland.
- The transportation service surplus, which had increased gradually in 2000s, reaching 6¼ percent of GDP in 2010, started to decline since then and is now less than 4 percent of GDP in 2015.

Transport Services
(In percent of GDP)



Sources: Haver Analytics; CEIC; and IMF staff estimates.

- As Hong Kong SAR is a small open economy, its trade flows have been inevitably affected by subdued global trade and cargo flows amid sluggish demand in advanced economies. So net of cyclical factors, we assess that a structural development has lowered the current account surplus by 1.0–1.5 percentage points of GDP.

Current Account Adjustment

(In percentage points of GDP)

Actual adjustment	11.5–12.0
Main factors	
External rebalancing of Mainland China	4.0–4.5
Bilateral trade with China (nonprocessing)	11.5–12.0
Offsetting by other bilateral trade	-7.5
Monetary gold trade	4.0–4.5
Rising tourist arrivals from the Mainland	1.0–1.5
Steady decline in transport services	1.0

C. Current Account Norm

10. The EBA-type estimate implies that Hong Kong SAR's current account norm is a surplus of about 14 percent of GDP as of 2015.

- Hong Kong SAR is not included in the current account panel regression model of the external balance approach (EBA). Thus, it has been common practice to use EBA's coefficients to estimate an implied CA norm for Hong Kong SAR.
- As of 2015, EBA norm estimate is 13.8 percent of GDP while cyclically-adjusted CA balance is 2.5 percent, implying total gap of 11.3 percent of GDP.

11. However, staff assess that this EBA-type estimate of Hong Kong SAR's current account norm is unreasonably high due to two technical factors and two structural factors that are not captured in EBA framework as below. Adjustment of these factors imply that the current account norm in Hong Kong SAR is about 1–4 percent of GDP.

12. Technical factor 1 (returns on NFA position)

- A key factor behind Hong Kong SAR's large EBA-implied current account norm is its net international investment position (NIIP), contributing around 4 percentage points of GDP. The rationale is that higher NIIP should be associated with larger primary income balance and thus larger current account balance.
- In fact, despite its large positive NIIP, Hong Kong SAR does not have large primary income, at least not to the same extent as other countries with more modest NIIP positions.
- Although Hong Kong SAR's returns on foreign assets are slightly above those of other major countries, returns on its liabilities, that is, what it pays to the world, are substantially above

those of other countries. Moreover, Hong Kong SAR pays out higher returns on its liabilities than it receives on its assets, something that is uncommon.

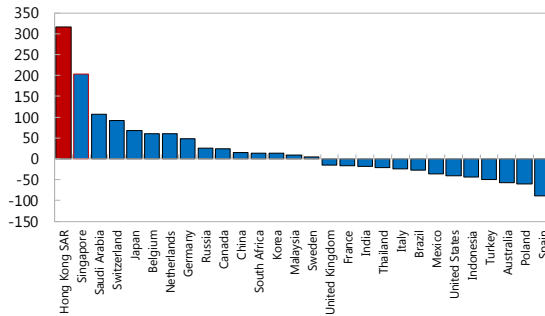
- Accounting for these differences reduces the contribution of the NIIP variable to 0.3–1.9 percentage points of GDP—a downward adjustment of 2.1–3.7 percentage points to EBA-implied Hong Kong SAR’s norm.

13. Technical factor 2 (financial center dummy)

- EBA panel regression notes that financial centers are found to have a current account balance about 3½ percent of GDP higher on average than others and takes care of this by adding a financial center dummy.
- Application of the coefficient for this dummy to Hong Kong SAR increases the norm estimate by 2¾ percentage points of GDP.
- However, given that this dummy is introduced to adjust specifically for Netherlands, Switzerland, and Belgium (for the first half of the sample period), we believe that it is not applicable to other economies including Hong Kong SAR.

Hong Kong SAR Has the Largest NIIP Among the ESR Sample

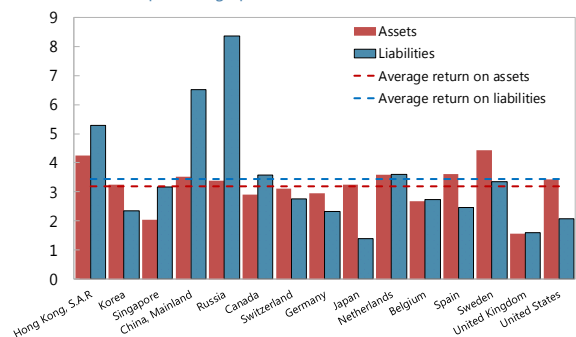
(NIIP in percentage points of GDP in 2015)



Source: WEO.

Returns on Foreign Asset and Liabilities

(Annualized in percentage points)



Source: Haver.

14. Two structural factors

- Gold trade balance. As discussed above in paragraph 7, staff assess that the structural changes in gold trade has lowered the norm as well by about 4–4½ percentage points of GDP.
- Transport services balance. As discussed above in paragraph 9, staff assess that a decline in transport service balance is a structural development, lowering the norm by 1.0-1.5 percentage points of GDP.

D. Conclusion

15. Hong Kong SAR’s external positions are broadly in line with fundamentals and desirable policies.

- Staff assessment is that above-mentioned four factors which have narrowed Hong Kong SAR's current account surplus significantly (by more than 10 percentage points of GDP) over the last few years are structural developments and they are unlikely to be reversed in the medium term. So staff projects that current account surplus would remain at about 2–4 percent of GDP over the medium term.